

Research of the Hydrostatic Transmission Static Characteristics in Case of Curvilinear Moving of the Mobile Machine

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Abstract

© 2018 IEEE. The article considers the vehicle hydrostatic transmission containing a volumetric axial flow divider. The displacements of sections of the flow divider are varied by adjusting the swash plates angles. Thus, the flow divider provides independent control of the angular velocity of each unadjustable hydraulic motor. The method of calculating the swash plate slope angle of each section of the flow divider in dependence on the turning radius of the vehicle is presented. The static characteristics of the hydrostatic transmission of the vehicle under the conditions of motion along a curvilinear trajectory were obtained.

<http://dx.doi.org/10.1109/GFPS.2018.8472317>

Keywords

Axial flow divider, Curvilinear moving, Hydrostatic transmission, Mobile machines

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